

# PROPOSED Changes to API RP 14C

## **Recommended Practice for Analysis, Design, Installation, and Testing of Safety Systems for Offshore Production Facilities**

# API RP 14C Schedule

- Previous Schedule
  - Committee work begins – 2010
  - Committee re-organized and scope more fully defined March 2011
  - First draft to API – 4<sup>th</sup> Qtr. 2013
  
- Projected Schedule
  - Review, comment and applicability discussions with BSEE – 4<sup>th</sup> Qtr. 2013
  - Comment review cycle – 4<sup>th</sup> Qtr. 2013  2014
  - Final standard – 2014

# Committee Make-Up

- Chevron
- ExxonMobil
- Shell
- BP
- ConocoPhillips
- BSEE (U.S. Bureau of Safety & Environmental Enforcement)
- ABS (American Bureau of Shipping)
- Helis Oil & Gas Company, L.L.C.
- Marathon Oil Company
- Petrobras
- KBR Engineering
- Mustang Engineering
- Black Elk Energy
- EDG Engineering
- C & D Production Company
- Murphy Oil
- Anadarko Oil
- Apache Oil
- LLOG Exploration
- Energy XXI



# Concurrent Standards Work

- API 17V Subsea Safety Systems
  - Provide a clear division for Topsides and Subsea Safety Systems
  - Maintain a similar prescriptive format
  - Ensure consistent requirements for shut-in
  - Aligned definitions
  - Subsea components removed from API 14C and moved to API 17V

# Proposed Changes to the 8<sup>th</sup> Edition?

- Expanded from Platforms to Facilities to cover floating facilities
- Added focus on electronic systems to accommodate new technologies
- Better alignment with API 521 “*Guide for Pressure-Relieving and Depressuring Systems*” for pressure relieving and depressuring systems
- Boarding Valve requirements added
- New requirements to address export pipeline back flow and facility settle out included



## Proposed Changes to the 8<sup>th</sup> Edition?

- Additional requirement for pumps and compressor > 1000 h.p. and reference to API 670 added
- Temporary Equipment defined and required to meet API 14C
- Low Temperature hazards “Embrittlement” addressed
- Open deck Fire and Gas detection sensor placement and sensor type enhanced
- Extensive emphasis on performing hazards analysis to included introduction of the Prevention vs Mitigation concepts

# Annex Modifications

- Annexes defined as informative or normative
- Annexes, Figures and Tables updated and corrected
- Appendix B Analysis Tables “Deleted”
- New Annexes Developed
  - Topsides HIPPS
  - Safety System Bypassing
  - Logic Solver
  - Remote Operation

# Topsides HIPPS

- HIPPS Requirements
  - 14C will be modified to include HIPPS requirements for topside and some flowlines applications where PSV protection is not provided
  - HIPPS will be an independent system
    - Performance option in accordance with API 521 (i.e. risk based SIL2/3 solution),  
OR
    - Prescriptive solution describing,
      - ▶ Design
      - ▶ Commissioning
      - ▶ Documentation
      - ▶ Operation
      - ▶ Maintenance & Testing

# Safety System and ESS Bypassing

- Bypass Classes
  - All bypass classes are thoroughly defined
  - Example uses for various bypass classes are given
  - Annunciation requirements for bypasses are defined
  - Specific time delays are outlined and process for extending these time delays is described
- Automated Bypasses
  - Automated bypasses are to be maximized in order to minimize the potential for human error
- Emergency Support Systems (ESS) Bypassing
  - Bypassing of ESS related systems defined in more detail

# QUESTIONS

